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No. 99-1882

IN THE
Supreme Court of the United States
OCTOBER TERM, 1999

GEORGIA-PACIFIC CORPORATION,

Petitioner,

v.

UNITED STATES GYPSUM COMPANY, AND
L&W SUPPLY CORPORATION,

Respondents.

ON A PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BRIEF FOR RESPONDENTS

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SUMMARY OF THE ARGUMENT

In light of this Court's *Markman* decision which held that interpretation of claims is a question of law, the Federal Circuit has consistently held that obviousness-type double patenting is a legal question subject to *de novo* review. Accordingly, the Federal Circuit neither made new law nor changed existing law with its decision below. Indeed, none of the cases that Petitioner cites to support its argument conflict with the Federal Circuit's decision.

Moreover, the Petitioner's contention that an obviousness-type double patenting inquiry parallels an obviousness inquiry under 35 U.S.C. § 103 is incorrect. Because an obviousness-type double patenting inquiry requires a comparison of a claim with an earlier-issued claim, not the prior art, the inquiry is entirely a question of law. Even assuming that obviousness-type double patenting required an inquiry identical to Section 103 obviousness, Petitioner cannot identify what factual findings the Federal Circuit supposedly made in its decision below. The minor differences between the claim at issue and the earlier claim were obvious as a matter of law.

ARGUMENT

The Federal Circuit's decision in this case was carefully considered, and did not expressly or implicitly make new law or change existing law. Obviousness-type double patenting is a question of law subject to *de novo* review by the Federal Circuit. There are no factual underpinnings to the double patenting inquiry because the Federal Circuit has consistently held that double patenting requires a comparison of the ***claims*** of the two patents. After this Court's decision in *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), which held that the interpretation of claims is exclusively a legal question, the double patenting inquiry requires a court to construe the claims of both the earlier and later issuing patents (legal questions) and compare them to one another (also a legal question). Because the Federal Circuit neither made new law nor a mistake in the law, Respondent respectfully requests that this Court deny Petitioner's request for review of the Federal Circuit's decision.

I. The Federal Circuit's Decision Was Carefully Considered, and Neither Explicitly Nor Implicitly Reversed Any Earlier Decision of This Court or the Federal Circuit.

The Federal Circuit's decision below did not announce or imply either a reversal or clarification of any prior decision of this Court or the Federal Circuit, although it was entirely aware of Petitioner's arguments that it was doing so. Following the Federal Circuit's decision, Petitioner asked for rehearing or an *en banc* hearing on the double patenting issue, and the Federal Circuit requested both parties to file additional briefs on that issue.

In its additional brief, Petitioner specifically raised the arguments it advances before this Court, namely that the

Federal Circuit's decision: (1) "misapprehended" 35 U.S.C. § 282 as well as prior Federal Circuit precedent; and (2) improperly held that double patenting is subject to *de novo* review. The Federal Circuit reviewed that brief before rejecting Petitioner's arguments that these issues warranted rehearing or *en banc* hearing.

II. The Federal Circuit Has Consistently Held That Double Patenting Is a Question of Law, and Requires a Comparison of *Claims*.

Obviousness-type double patenting occurs "if the application claims are not patentably distinct from the prior patent claims, and the prior patent claims are also not patentably distinct from the application claims." *In re Goodman*, 11 F.3d 1046, 1053 (Fed. Cir. 1993); *see also In re Braat*, 937 F.2d 589, 593 (Fed. Cir. 1991). Double patenting is a judicially created doctrine designed to prevent a patentee from extending the period of exclusivity. The Federal Circuit summarized the purpose behind the doctrine in its decision in *Goodman*:

> By adopting the easy course of filing a continuation or divisional application to gain a *narrow* claim, a patentee could gain an extension of the term on a species when the broad genus later issued. *Goodman*, 11 F.3d at 1053 (emphasis added).

For this reason, the Federal Circuit has held that "double patenting is ***altogether a matter of what is claimed***," *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1277 (Fed. Cir. 1992) (emphasis added), and is a question of law. *See Gerber Garment Tech., Inc. v. Lectra Sys., Inc.*, 916 F.2d 683, 686 (Fed. Cir. 1990); *In re Longi*, 759 F.2d 887, 892-93 (Fed. Cir. 1985). Accordingly, the Federal Circuit

reviews decisions concerning double patenting *de novo*, exactly as it did in its decision below.

III. The Decision Below Does Not Conflict With Prior Precedent.

Petitioner argues that the decision below conflicts with precedent of this Court and/or the Federal Circuit. The allegedly conflicting cases petitioner cites do not support its argument. Each is not conflicting for one or more of the following reasons: (1) it was decided before this Court's decision in *Markman* holding that claim construction is exclusively a matter of law; (2) its relevant language is *dicta*; or (3) it is inapposite because it relates to obviousness over ***prior art*** under 35 U.S.C. § 103, and not to obviousness-type double patenting.

A. Pre-*Markman* Decisions

This Court rendered its decision in *Markman* in April 1996. It affirmed the decision of the Federal Circuit that construction is ***purely*** a question of law, and is entirely within the province of the court. Prior to this Court's decision in *Markman*, some Federal Circuit precedent had indicated that claim interpretation might implicate certain factual issues. The issue of double patenting, therefore, although involving claim comparison, might also have required a factual inquiry to provide support for interpreting the claims being compared. Following *Markman*, however, such inquiry was neither required nor appropriate. Courts must now interpret claims ***as a matter of law***, and must conduct an obviousness-type double patenting inquiry by comparing claims interpreted as a matter of

law. The *Braat*,[1] *Symbol Technologies*,[2] *Longi*,[3] and *Northern Petrochemicals*[4] cases cited by Petitioner all were decided well before this Court's *Markman* decision, and did not have the clear and unequivocal guidance of this Court that claim construction is ***solely*** an issue of law to be resolved by the District Court, subject to *de novo* review by the Federal Circuit.

B. Petitioner Relies Upon *Dicta* From the *Northern Petrochemicals* Case, Which Did Not Consider the Issue of Obviousness-Type Double Patenting.[5]

The quote from *Northern Petrochemicals* (a ***pre-*Markman** decision in 1986) upon which Petitioner places such heavy reliance is plainly *dicta*, and is taken out of the procedural context in which the Federal Circuit reviewed the issue of obviousness-type double patenting. *See* Petition for a Writ of Certiorari at 14. That quote is:

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[1] *In re Braat*, 937 F.2d 589 (Fed. Cir. 1991).

[2] *Symbol Techs., Inc. v. Opticon, Inc.*, 935 F.2d 1569 (Fed. Cir. 1991).

[3] *In re Longi*, 759 F.2d 887.

[4] *Studiengesellschaft Kohle v. Northern Petrochems. Co.*, 784 F.2d 351 (Fed. Cir. 1986).

[5] Petitioner also inexplicably relies upon a case which Federal Circuit Rule 47.8 precludes Petitioner from citing as precedent. *See Mirafi Inc. v. Murphy*, 928 F.2d 410 (Fed. Cir. 1991) (unpublished). In addition, the case was ***pre*-Markman**.

> Prior to the Federal Circuit's decision in this action, a party that had not adduced evidence on the relevant *Graham* factors could not meet its burden of establishing invalidity for obviousness-type double patenting. *Id.*

The rest of the story is that in *Northern Petrochemicals* the district court had ruled only on the issue of "same invention" double patenting, and not obviousness-type double patenting. *Northern Petrochems.*, 784 F.2d at 354. What Petitioner leaves out of its quote is that the Federal Circuit found that the district court had "***made no findings*** as to obviousness-type double patenting." *Id.* at 355. That was the reason that the issue of obviousness-type double patenting was "not involved in [the *Northern Petrochemicals*] case" – there was nothing to review.

C. Petitioner Improperly Relies Upon Cases Involving the Standard of Review of Obviousness Over Prior Art Under 35 U.S.C. § 103.

Petitioner cites the *Northern Petrochemicals* and *Pac-Tec*[6] cases as holding that the Federal Circuit requires that a district court conduct a *Graham v. Deere*, 383 U.S.1(1966), analysis in determining the issue of obviousness-type double patenting. *See* Petition at 14-15. However, these cases merely ***analogize in general***[7] the double patenting inquiry to the § 103

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[6] *Pac-Tec, Inc. v. Amerace Corp.*, 903 F.2d 796 (Fed. Cir. 1990).

[7] While ***analogous*** to the non-obviousness requirement of 35 U.S.C. § 103, that section is not itself involved in double patenting rejection because the patent principally underlying the rejection is not prior art." *In re Braithwaite*, 379 F.2d

(continued...)

statutory obviousness inquiry over prior-art in the sense that both tests look at the validity of a claim in light of an earlier description. The difference is that where § 103 obviousness may require a ***factual*** inquiry of what the prior art ***reference taken as a whole*** would teach to a person of ordinary skill in the art, double patenting merely requires the court to interpret a prior ***claim as a matter of law***. This critical distinction, blurred by Petitioner here, was made clear by the Federal Circuit in the *General Foods* case, even before *Markman*:

> Double patenting is altogether a matter of what is claimed. Claim interpretation is a question of law which we review *de novo*.
>
> * * *
>
> The [district] court failed to observe the distinction between a claim as a written disclosure and a claim as a definition of an invention.
>
> * * *
>
> Our precedent makes clear that the disclosure of a patent cited in support of a double patenting rejection cannot be used as though it were prior art, even where the disclosure is found in the claims.
>
> * * *
>
> 'We are not here concerned with what one skilled in the art would be aware [of] from reading the claims but with what invention the claims define.' *General Foods*, 972 F.2d at 1277-82 (citing *In re Sarett*, 327 F.2d 1005, 1013 (C.C.P.A. 1964))

(...continued)
597, 600 n.4 (C.C.P.A. 1967), *cited with approval in General Foods*, 972 F.2d at 1282.

As explained more fully below, this critical distinction makes the *Graham v. Deere* factors irrelevant to double-patenting type obviousness.

IV. The Double Patenting Inquiry Does Not Require a *Graham v. Deere* Obviousness Analysis.

Petitioner asserts that the obviousness-type double patenting inquiry invariably requires an inquiry identical to a prior art obviousness inquiry under 35 U.S.C. § 103, and that the Federal Circuit's decision here violates this supposed rule. As discussed below, Petitioner is incorrect, and the differences between obviousness under Section 103 and obviousness-type double patenting justify two different tests.

Under Section 103, the claims are compared to what is taught by the ***prior art***. The first step under Section 103 is a determination of what the prior art teaches, which may implicate a question of fact. However, obviousness-type double patenting compares the claim at issue with an earlier-issued claim not prior art. The construction of the earlier-issued claim, unlike the teachings of the prior art, is a purely legal issue that does not implicate questions of fact. *See General Foods*, 972 F.2d at 1277.

The second step in a Section 103 analysis is to determine whether any differences between the claimed invention and the prior art would be obvious. The question is viewed through the eyes of one of ordinary skill in the art, and again fact issues may be implicated as to both what that skill level is, and what would be obvious to the hypothetical person. Because it is the ***claims*** that are compared in a double patenting inquiry, the level of skill in the art and what would be obvious to one who possessed it are not relevant. The Court determines as a matter of law what differences, if any, exist between the claims and whether those differences are obvious. The Court of

Customs and Patent Appeals – predecessor to the Federal Circuit – made this abundantly clear:

> We are not here concerned with what one skilled in the art would be aware [of] from reading the claims ***but what inventions the claims define***. Sarett, 327 F.2d at 1013 (emphasis added), *cited with approval in General Foods*, 972 F.2d at 1282.

Upon the faulty base that factual findings on the *Graham v. Deere* issues must be made to support obviousness-type double patenting, Petitioner constructs the argument that, because the record was barren on those issues, the Federal Circuit improperly and, *sub silentio*, made its own factual findings. *See* Petition at 7-8. Petitioner cannot identify what factual findings the Federal Circuit allegedly made or where it made them because there were none. The Federal Circuit simply interpreted the claims, and found that the minor differences between the later claims and the earlier ones were obvious as a matter of law.

The Federal Circuit, after construing the claims, found that only two differences existed between claim 1 of the '989 patent and claim 1 of the earlier '569 patent. (App. A at 8a.) The first concerns the outer surfaces of the boards. *See id.* Claim 1 of the earlier '569 patent describes the outer surface of one mat to be "coated with set gypsum" and the outer surface of the other mat to be "substantially free of set gypsum." Claim 1 of the '989 patent states that "at least a first of said mats [has] an outer surface which is substantially free of set gypsum," and says nothing about the outer surface of the other mat. Both therefore require that "***at least one*** outer surface of the board is substantially gypsum-free." (App. A at 9a (emphasis added).) The "minor linguistic difference" did not patentably distinguish them.

The Federal Circuit also noted the different transition phrases that describe the types of fibers that make up the mat. (App. A at 10a-14a.) Claim 1 of the earlier '569 patent recited "said mat ***comprising*** randomly distributed glass fibers bonded by an adhesive material"; and claim 1 of the '989 patent recited: "said mats ***consisting*** of randomly distributed glass fibers bonded by an adhesive material." On this point Petitioner contends that a factual inquiry is necessary to determine whether a claim using the term "comprising" is patentably distinct from an otherwise identical claim using the term "consisting." Acknowledging that the terms "consisting" and comprising" are terms of art with well-established meanings, the Federal Circuit properly concluded that the use of these terms merely meant that "the invention claimed in the '989 patent is, with respect to the glass mats, merely a subset of the invention claimed in the '569 patent." (App. A at 11a.) None of the *Graham v. Deere* factors has any relevance to this determination. *See Spectrum Int'l, Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1379-80 (Fed. Cir. 1998) (defining comprising); *In re Gray*, 53 F.2d 520, 521 (C.C.P.A. 1931) (defining consisting).

V. Petitioner Did Not Preserve Its Right to Appeal the Issue of Obviousness-Type Double Patenting on the Stated Grounds.

An independent reason for denying this petition is that Petitioner made the argument presented here for the first time in its petition for rehearing and *en banc* hearing in the Federal Circuit, after the Federal Circuit had announced its decision. Petitioner did not challenge, either at the District Court or the Federal Circuit, the jury instruction on obviousness-type double patenting that made no mention of the *Graham v. Deere* factors, as contrasted with the jury instruction on obviousness under Section 103, which specifically referred to those factors.

At trial and in its prior appellate briefs, Petitioner only argued against the construction given to the claims of the '989 patent in response to Respondents' double patenting defense. Petitioner ***never asserted that Respondent failed to adduce sufficient factual evidence to meet its burden of proof on double patenting***. Consequently, neither the Federal Circuit nor this Court should consider Petitioner's argument. *See Finch v. Hughes Aircraft Co.*, 926 F.2d 1574, 1576 (Fed. Cir. 1991) ("It is well-settled that, absent exceptional circumstances, a party cannot raise on appeal legal issues not raised and considered in the trial forum.").

CONCLUSION

The Federal Circuit made no new law with its decision below, and certainly did not make the "substantial change" in the law claimed by Petitioner. The Federal Circuit carefully considered Petitioner's arguments, and rejected them. This Court should deny Petitioner's request that it adopt for the first time a requirement that obviousness-type double patenting be subject to the same *Graham v. Deere* test as statutory obviousness under 35 U.S.C. § 103.

Respectfully submitted,

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APPENDIX

APPENDIX A – DECISION OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT DATED AND DECIDED NOVEMBER 1, 1999

GEORGIA-PACIFIC CORPORATION, Plaintiff-Cross Appellant,
v.
UNITED STATES GYPSUM COMPANY and L & W Supply Corporation, Defendants-Appellants.

Nos. 97-1238, 97-1244.

United States Court of Appeals,
Federal Circuit.

Nov. 1, 1999.

Before BRYSON, Circuit Judge, ARCHER,* Senior Circuit Judge, and GAJARSA, Circuit Judge.

DECISION

PER CURIAM.

United States Gypsum Company and L W Supply Corporation (USG) appeal the judgment of the United States District Court for the District of Delaware holding that USG infringed claims 1, 2, and 5 of U.S. Patent No. 4,647,496 (the '496 patent) and claims 1, 6, 9, 10, 12, 15, and 17 of U.S. Patent No. 5,371,989 (the '989 patent), both patents being owned by Georgia-Pacific Corporation (Georgia-Pacific). In addition, USG appeals the district courts denial of its motion for judgment as a matter of law (JMOL) that all of the

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* Senior Circuit Judge Archer vacated the position of Chief Judge on December 24, 1997.

asserted claims are invalid due to obviousness in light of the prior art and that the asserted claims of the '989 patent are invalid for obviousness-type double patenting over the '496 patent and U.S. Patent No. 4,810,569 (the '569 patent).[1] USG also appeals the order of the district court granting a new trial rather than granting USG's post trial motion for JMOL with respect to infringement of claim 11 of the '496 patent, claim 8 of the '989 patent and claim 1 and 2 of U.S. Patent No. 5,319,900 (the '900 patent), also owned by Georgia- Pacific. Georgia-Pacific cross appeals the district courts failure to find USGs infringement of Georgia-Pacifics patents willful and its order granting a new trial to USG with respect to infringement of claim 11 of the '496 patent, claim 8 of the '989 patent, and claims 1 and 2 of the '900 patent. We affirm- in-part, reverse-in-part, vacate-in-part and remand.

BACKGROUND

The patents at issue relate to fiberglass[2] mat-reinforced gypsum boards and the use of such boards in exterior insulation systems (EISystems).

Gypsum wallboard traditionally consists of a hardened gypsum core sandwiched between paper facing or similar reinforcing sheets. It is typically manufactured on a conveyor system. The gypsum is crushed and ground and mixed with water to form a core slurry. The core slurry is spread onto a first sheet of paper. A second sheet of paper is placed on top of the wet slurry. This combination is passed under a roller to achieve the desired thickness. After the core

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[1] The '569 patent is not at issue in this appeal.

[2] The terms "fiberglass" and "glass" are used interchangeably herein.

gypsum sets or hardens, the board is cut and then turned over and dried in a kiln.

Exterior gypsum wallboard, sometimes referred to as sheathing, is a component in an EISystem. The gypsum sheathing is attached to a frame of a house. Despite the use of water-resistant additives as well as water-repellent facings gypsum sheathing continued to be susceptible to degradation by water. If the paper faced gypsum board became wet, the paper facing would often peel away from the gypsum core.

The use of fiberglass mats instead of paper mats was known to solve peeling. The manufacture of a fiberglass gypsum board on the same production line used for the manufacture of traditional paper faced gypsum board remained a problem. Fiberglass matting, being more porous than paper matting, allowed the gypsum slurry to bleed through and foul the production line and, particularly, the rollers. Although the production line could be stopped to clean the gypsum buildup off the manufacturing rollers, some of the rollers, such as those in or near the kiln, were not easily accessible for such clean up.

Georgia-Pacific realized that the problem of the gypsum slurry bleeding through the fiberglass could be solved by controlling the viscosity of the slurry. Georgia-Pacific patented this invention as well as the use of such a fiberglass faced gypsum board in an EISystem in the patents at issue.

The '496 patent contains claims directed to an EISystem installed using glass mat faced gypsum boards. The jury found that USG infringed claims 1, 2, 5, and 11 of the '496 patent. The jurys verdict was sustained by the district court, except for claim 11. The court held that Georgia-Pacific had not adduced substantial evidence to support an infringement verdict as to claim 11 and granted

USG a new trial.

The jury found that USG infringed asserted claims 1 and 2 of the '900 patent. This patent is directed to a fiberglass mat-reinforced gypsum board which contains fire and water-resistant additives. The district court held that the evidence did not support infringement of these two claims and granted USG a new trial.

The final patent on appeal, the '989 patent, contains claims directed to both fiberglass mat-reinforced gypsum boards and EISystems using such boards. Each of the asserted claims 1, 6, 8, 9, 10, 12, 15 and 17 was found by the jury to be infringed by USG. In this case the district court sustained the infringement verdict as to all claims except claim 8. This claim required the use of certain fire-resistant additives. Like its holding as to claims 1 and 2 of the '900 patent the court found there was not substantial evidence to support infringement and granted USG a new trial.

The parties have dealt with the claims under five categories; namely, sandwiched claims, faced claims, system claims, additive claims and board claims. The sandwiched claims, whether describing the board or the use of the board in an EISystem, contain the limitation that the gypsum core is sandwiched between two sheets of porous fiberglass mat. The faced claims all have the limitation that the gypsum board be faced with a fibrous mat, or that it be glass-mat faced. The system claims relate to the use of fiberglass mat-reinforced gypsum boards as the substrate for layered systems used to finish the exterior portions of buildings. The additive claims contain the limitation that the claimed fiberglass mat-reinforced gypsum board contain additives which improve the fire and/or water-resistant properties of the boards. Finally the board claims all claim a fiberglass mat-reinforced gypsum board (which in some cases contains fire or water-resistant additives).

DISCUSSION

I. Obviousness-Type Double Patenting

USG contends that the '989 patent, which issued more that five years after the '569 patent, was invalid for obviousness-type double patenting over the claims of the '496 and '569 patents. Georgia-Pacific, however, asserts that there are patentable distinctions between the claims of these patents, and that USG presented no competent evidence in support of its contention. The district court did not dwell on this issue, and merely dismissed it (along with certain other contentions of USG in its motion for JMOL) by stating that it had reviewed them and finds them to be without merit.

Double patenting is a question of law, which we review *de novo*. *See General Foods Corp. v. Studiengesellschaft Kohle*, 972 F.2d 1272, 1277, 23 USPQ2d 1839, 1843 (Fed.Cir.1992). *De novo* review is appropriate because double patenting is a matter of what is claimed, and therefore is treated like claim construction upon appellate review. *See id.* at 1277, 23 USPQ2d at 1843. Obviousness-type double patenting is a judicially created doctrine grounded in public policy, which prevents the extension of the term of the original patent via the patenting of an obvious variation. *See In re Longi*, 759 F.2d 887, 892, 225 USPQ 645, 648 (Fed.Cir.1985). Under obviousness-type double patenting, a patent is invalid when it is merely an obvious variation of an invention disclosed and claimed in an earlier patent by the same inventor. *See General Foods*, 972 F.2d at 1278, 23 USPQ2d at 1843; *In re Vogel*, 57 C.C.P.A. 920, 422 F.2d 438, 442, 164 USPQ 619, 622 (1970). Accordingly, analysis of the claims at issue is the first step in determining if the second invention is merely an obvious variation of the first.

In this case, the jury found that USG did not infringe claim 1 of the '569 patent, but held that claims 1, 6, 8, 9, 10, 12, 15, and 17 of the '989 patent had been infringed. USG contends that the claims of the '989 patent are invalid due to obviousness-type double patenting.

Claim 1 of the '569 patent reads as follows:

> Gypsum board comprising a set gypsum core sandwiched between two sheets of porous glass mat, each of which has an inner and outer surface, said mat comprising randomly distributed glass fibers bonded by an adhesive material, the inner surface of each of said mats adhered to said gypsum core by a portion of the set gypsum comprising said core, the outer surface of one of said mats having portions thereof coated with set gypsum comprising portions of the set gypsum of said core, and the outer surface of the other of said mats being substantially free of set gypsum.

Claim 1 of the '989 patent reads as follows:

> A gypsum board comprising a set gypsum-containing core sandwiched between two sheets of porous glass mat, each of said mats consisting of randomly distributed glass fibers bonded by an adhesive material, said mat adhered to set gypsum core by a portion of said set gypsum, at least a first of said mats having an outer

> surface which is substantially free of set gypsum.

These two claims are very similar. Indeed, the basic construction of the boards is identical, which is clear from this comparison of the language of the claims:

Patent '569, claim 1	Patent '989, claim 1
Gypsum board comprising a set gypsum core sandwiched between two sheets of porous glass mat	A gypsum board comprising a set gypsum-containing core sandwiched between two sheets of porous glass mat.
the inner surface of each of said mats adhered to said gypsum core by a portion of the set gypsum comprising said core	said mat adhered to set gypsum core by a portion of said set gypsum
the outer surface of said mats being substantially free of set gypsum.	at least a first of said mats having an outer surface which is substantially free of set gypsum.

Because these two claims are so similar, we must look to see if there is anything to distinguish claim 1 of the '989 patent from claim 1 of the '569 patent. There are two differences between these claims. The first difference arises from the outer surfaces of the boards described by the claims.

Claim 1 of the '569 patent recites

> the outer surface of one of said mats having portions thereof coated with set gypsum of said

> core, and the outer surface of the other of said mats being substantially free of set gypsum.[3]

Claim 1 of the '989 patent requires a sandwiched gypsum board that has

> at least a first of said mats having an outer surface which is substantially free of set gypsum.

Claim 1 of the '989 patent does not require that one side of the board be "coated with set gypsum." The failure to claim the gypsum coating, however, does not distinguish claim 1 of the '989 patent from claim 1 of the '569 patent.

Claim 1 of the '569 patent recites a board made up of two glass fiber mats, a gypsum slurry sandwiched between them, with one outer surface of a glass fiber mat coated by gypsum slurry that seeped through the mat while the other outer surface is free of gypsum. Claim 1 of the '989 patent recites a board made up of two glass fiber mats, a gypsum slurry sandwiched between them, with at least one outer surface free of set gypsum. No claim is made as to the nature of the other side of the board in claim 1 of the '989 patent. The prior art shows that making a board with a gypsum coating on at least one side was well known. This minor linguistic difference does not serve to distinguish claim 1 of the '989 patent from claim 1 of the '569 patent in a nonobvious way, because the '989 claim language can be

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[3] Despite USG's assertion that claim 1 of the '569 patent has a "'gypsum-free' limitation for *both* sides" USG is mistaken. Claim 1 of the '569 patent describes a board with gypsum slurry from the core covering the outer surface of one of the fiberglass mats, while the outer surface of the other mat is substantially free of set gypsum.

used to describe a set of boards that are described by the '569 patent or vary in an obvious manner based on the amount of gypsum on the outer surface of one of the glass mats.

> Based on their language, claim 1 of the '989 patent is merely an obvious variation of claim 1 of the '569 patent with respect to the outer surfaces of the board, because the failure to claim anything with respect to the characteristics of one outer surface of the board does not distinguish these claims. The language of the claims bears out this obvious variation, as both claim that at least one outer surface of the board is substantially gypsum free.

Georgia-Pacific argues that claim 1 of the '989 patent is patentably distinct from claim 1 of the '569 patent. Claim 1 of the '569 patent reads as follows:

> said mat comprising randomly distributed glass fibers bonded by an adhesive material,

whereas claim 1 of the '989 patent reads as follows:

> each of said mats *consisting* of randomly distributed glass fibers bonded by an adhesive material.

Georgia Pacific argued at trial that the terms "comprise" and "consist" have different meanings; the appellee is correct in this contention. The Manual of Patent Examining Procedure explains the difference between "comprise" and "consist" in patent law as follows:

> The transitional term "comprising" ... is inclusive or open-ended and does not exclude additional, unrecited elements or

method steps.[4]

> The transitional phrase "consisting of" excludes any element step, or ingredient not specified in the claim.[5]

Patent and Trademark Office, Department of Commerce, *Manual of Patent Examining Procedure*, § 2111.03 (6th ed.1997). From these definitions it is clear that "comprise" is a broader term than "consist." The set of mats that are "comprised" of glass fibers includes the subset of mats that "consist" of glass fibers and also includes mats made up of glass fibers and other substances. Whereas, mats that "consist" of glass fibers are made up of glass fibers and nothing else. In this case, claim 1 of the earlier '569 patent uses the broader term "comprise," while claim 1 of the later '989 patent uses the narrower term "consist." Thus, any mat that meets the "consist" requirement of the '989 patent would also meet the "comprise" requirement of the '569 patent. In effect, the invention claimed in the '989 patent is, with respect to the glass mats, merely a subset of the invention claimed in the '569 patent.

After analyzing the language of the claims, it is clear that claim 1 of the '989 patent is merely an obvious variation of claim 1 of the '569 patent. While claim 1 of the '989 patent is slightly broader than claim 1 of the '569 patent with respect

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[4] For this definition, *see Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 229 USPQ 805 (Fed. Cir. 1986), and *In re Baxter*, 656 F.2d 679, 210 USPQ 795 (CCPA 1981).

[5] For this definition, see *In re Gray*, 53 F.2d 520, 19 C.C.P.A. 745 (CCPA 1931), and *Ex parte Davis*, 80 USPQ 448, 450, 1949 WL 3555 (Bd.App.1948).

to the outer surfaces of the board, this difference is not enough to distinguish the two claims. With respect to the composition of the glass mats, the language and the disclosure of the '989 patent not only fail to distinguish it from the '569 patent, but indicate that it is merely a subset of the '569 patent. These differences are not sufficient to render the claims patentably distinct, and therefore, claim 1 of the '989 patent is invalid.

The dependent claims of the '989 patent--claims 6, 8, 9, 10, 12, and 15--are likewise invalid, as none of them adds any limitation that is sufficient to render it nonobvious in light of the claims of the '569 and '496 patents. Claims 6 and 8 recite the gypsum board of claim 1 with the gypsum core comprising a water-resistant additive (claim 6) or a fire-resistant additive (claim 8). The record reflects that the use of water-resistant and fire- resistant additives in the gypsum core of gypsum board was well known in the art, and the addition of those limitations does not render nonobvious the otherwise obvious gypsum board of claim 1. Claim 9 of the '989 patent largely tracks claims 4 and 6 of the '496 patent. The only difference between claims 4 and 6 of the '496 patent and claim 9 of the '989 patent is that claim 4 requires the outer surface of both glass mats to be substantially gypsum-free, claim 6 requires the outer surface of one of the glass mats to be gypsum-coated and the outer surface of the other to be gypsum-free, and claim 9 requires at least one of the mats to have an outer surface that is substantially gypsum free. Those differences in language do not render claim 9 of the '989 patent nonobvious over the prior patented claims. Claims 10 and 12 of the '989 add further limitations to the claim 9, but those limitations do not render claims 10 and 12 nonobvious in light of the claims of the '496 patent and the prior art. See claim 19 of the '496 patent (reciting an insulating material "substantially free of channels penetrating there through and between [the] inner and outer surfaces"); claim 5 of the '496 patent (reciting an exterior insulation

system "including a reinforcing member sandwiched between said insulating material and said finishing material"); '989 patent, col. 7, lines 43-47 (use of a reinforcing member sandwiched between the insulating material and the finishing material is known in the art). Finally, claim 15 of the ' 989 patent does not add any limitation that would render the invention of that claim nonobvious in light of claims 4 and 6 of the '496 patent, for the reasons set forth in the discussion of claim 9 of the '989 patent, above.

Furthermore, claim 17 of the '989 patent is similarly invalid.[6] Claim 1 of the '569 patent recites in part:

> two sheets of porous glass mat, each of which has an inner and outer surface, said mat comprising randomly distributed glass fibers bonded by an adhesive material....

The corresponding recitation in claim 17 of the '989 patent reads:

> at least one porous, non-woven glass mat ... said mat consisting of randomly distributed glass fibers bonded by an adhesive material....

Except for the use of "comprising" in the '569 patent and "consisting of" in the '989 patent, the "said" clause in both is identical, and the clause "randomly distributed glass fibers"

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[6] Claim 1 is an independent claim upon which claims 6, 8, 9, 10, 12, and 15 of the '989 patent depend. Claim 17 is an independent claim and does not depend upon claim 1. USG does not contend the differences between claim 17 and claim 1 (and its dependent claims) affect the double patenting analysis.

denotes a non-woven glass mat, so with regard to the structure of the mat, the two claims are identical. The use of the term "comprising" in the '569 patent and "consisting of" in the '989 patent renders the scope of the two claims different, but the difference is not sufficient to render claim 17 of the '989 patent nonobvious in light of claim 1 of the '569 patent, because it would have been obvious to construct the mat only out of glass fibers and adhesive, rather than out of glass fibers and adhesive and other unspecified substances.

There are no other differences between the two claims that suffice to render claim 17 nonobvious. It is true that claim 1 of the '569 patent requires two sheets of glass mat, while claim 17 of the '989 patent requires only "at least one" sheet of glass mat, but since a claim requiring two sheets anticipates a claim requiring at least one sheet, there is no difference flowing from that difference in the claim language that renders the claim patentably distinct. It is likewise true that claim 1 requires that one of the two glass mats must have "portions thereof coated with the set gypsum of said core," and also requires that the "outer surface of the other of said mats be[ ] substantially free of set gypsum." Claim 17, on the other hand, requires only that "an outer surface of said mat is substantially free of gypsum." Again, however, that difference in language does not reflect a difference in substance. Each limitation of a claim to a board that has at least one glass mat that is free of gypsum is met by a claim to a board that has two glass mats, one of which is at least partially coated with gypsum and the other of which is substantially free of gypsum. Thus, claim 17 of the '989 patent does not recite an invention that is nonobvious in light of the invention of claim 1 of the '569 patent, and it is invalid for obviousness-type double patenting.

Because we conclude that claims 1, 5, 8, 9, 10, 12, 15 and 17 of the '989 patent are invalid, we vacate the district court's judgment holding these claims infringed.

II. Obviousness

USG appeals the judgment below and seeks review of the jurys finding that the asserted claims of the patents at issue were not invalid and the district courts denial of its motion for JMOL. Patents are presumed valid by statute. *See* 35 U.S.C. 282 (1994). The burden is on the party asserting invalidity to prove it with facts supported by clear and convincing evidence. *See Weatherchem Corp. v. J.L. Clark, Inc.*, 163 F.3d 1326, 1334- 35, 49 USPQ2d 1001, 1007-8 (Fed.Cir.1998). Obviousness is a legal determination which we review *de novo*, while we review underlying factual findings under a deferential standard. *See id.* In a jury case, we review a denial of JMOL to determine whether the jurys factual determinations are supported by substantial evidence and, if so, whether those findings support the legal conclusions drawn by the jury in reaching its verdict. *See Read Corp. v. Portec, Inc.*, 970 F.2d 816, 821, 23 USPQ2d 1426, 1431 (Fed.Cir.1992); *Modine Mfg. Co. v. Allen Group, Inc.*, 917 F.2d 538, 541, 16 USPQ2d 1622, 1624 (Fed.Cir.1990).

A. The "board" claims

USG argues that the board claims are invalid as a matter of law under 35 U.S.C. § 103 based on the combination of the Morrone reference (Canadian Patent No. 993779) and the Rigips reference (German Patent No. 7806114). Because we conclude that claims 1, 6, 8, 17 of the '989 patent are invalid for obviousness-type double patenting, we consider USG's contentions with respect to the remaining board claims claims 1 and 2 of the '900 patent.

USG argues generally that the board claims are obvious in light of the prior art, including the Morrone and Rigips references. However, USG does not specifically address why these references would invalidate claims 1 and 2

of the '900 patent. Accordingly, we determine that the district court correctly upheld the jurys conclusion that USG failed to carry its burden to show facts supported by clear and convincing evidence that claims 1 and 2 of the '900 patent were invalid due to obviousness. The district court did not err in denying USG's motion for JMOL.

B. The "system" claims

With respect to the system claims, USG argues that these claims are simply the use of old boards in an old system. Claim 1 of the '496 patent is representative of the system claims[7]:

> An exterior insulation system for a building comprising a glass mat-faced gypsum support surface, insulating material having an inner surface and an outer surface, the inner surface of which is adhered to said support surface by an adhesive material, the insulating material being substantially free of channels penetrating there through and between said inner and outer surfaces, and an exterior finishing material overlying the outer surface of said insulating material.

USG contends that it was known that paper reinforced gypsum boards, because of the problems associated with exposure to water, constituted the weak link of EISystem and it, therefore, would have been obvious to use a fiberglass board.

None of the prior art references relied on by USG

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[7]Claims 1, 2, and 5 of the '496 patent can be classified as system claims.

suggests using a glass mat- faced gypsum board as part of an exterior system. USG's own expert admitted on cross-examination that he knew of no prior art references that suggested the use of a fiberglass mat-faced gypsum board in an EISystem. The evidence also established that there was a long-felt need to find a substrate suitable in an EISystem to which insulation could be glued rather than nailed, as well as one that would overcome the problems of the paper delaminating.

Given the evidence presented, which demonstrated the need for a better exterior system, the lack of suggestion in the prior art to use a system with a glass mat-faced board to meet this need, and the success the patented system achieved, there was substantial evidence to support the jurys finding of non- obviousness of the system claims. The district court did not err in denying USG's motion for JMOL.

III. Claim interpretation and infringement analysis

Literal infringement involves a two step process: the proper construction of the asserted claim and a determination whether the claim as properly construed reads on the accused product or method. *See Markman v. Westview Instr., Inc.*, 52 F.3d 967, 976, 34 USPQ2d 1321, 1326 (Fed.Cir.1995) (in banc), *affd*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). The first step, claim construction, is a question of law, which we review *de novo*. *See id.* at 979, 34 USPQ2d at 1329.

A. The "sandwiched" claims

Claim 11 of the '496 patent is representative of the "sandwiched" claims at issue in this case:

> An exterior finishing system for a building comprising an underlying structural support

> element ... said support element including gypsum board comprising a set gypsum core sandwiched between two sheets of porous glass fiber mat, the gypsum core including one or more additives which are effective in improving the water-resistant properties of the board....

(Emphasis added.)

The jury found that USG infringed Claim 11 of the '496 patent, which uses the term sandwiched, but the district court granted USG a new trial on the issue of whether this claim was infringed. The district court held that Claim 11 does not claim a board where the gypsum core may penetrate through and onto the outside of the mat.

The district court found that the word sandwiched had not been given a special definition in the patents and that it did not have a special meaning in the gypsum board manufacturing context. The court therefore gave the word its ordinary meaning – viz, to insert or place between – and instructed the jury that "sandwich means between two things and not through and outside one of the two things." After the jury returned a verdict of infringement in favor of Georgia-Pacific with respect to the claims of the '989 patent, the district court ruled on USG's JMOL motion that the construction of sandwiched did not constrain it from finding that the claims could cover a board with gypsum core between two porous glass mats with gypsum bleeding through the outer surface of one porous mat. The court ruled that because these claims specifically required only one side to be gypsum free, by implication the other side need not be gypsum free.

Georgia-Pacific argues that it is clear from the patent that it contemplates that gypsum might come through the

glass mat on one side. There would be no reason to specify that one surface is to be gypsum-free if sandwiched means that the gypsum could not go through either surface. Georgia-Pacific contends that sandwiched cannot mean that the gypsum must stay between both of the glass mats.

We agree with Georgia-Pacific. There would be no need to specify a gypsum free surface if the sandwiched term meant that the gypsum could not go through one of the glass mats. Further, other dependent claims, such as claim 8 of the '496 patent, specifically claim one of the fiberglass mats has an outer surface with portions thereof coated with set gypsum.

As we have discussed, the district court interpreted the "sandwiched" claim limitations in the patents as not precluding the gypsum core from flowing through one of the glass mats. In the case of Claim 11, however, the district court interpreted sandwiched differently – i.e., that the gypsum core must remain between the mats.

Unless the patent otherwise provides, a claim term cannot be given a different meaning in the various claims of the same patent. *See Southwall Tech., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1579, 34 USPQ2d 1673, 1679 (Fed.Cir.1995) (holding that claim term found in different claims must be interpreted consistently); *see also Fonar Corp. v. Johnson & Johnson*, 821 F.2d 627, 632, 3 USPQ2d 1109, 1113 (Fed.Cir.1987.) (holding that a term used in one claim had the same meaning in another claim). Interpretation of a disputed claim term requires reference to the other claims. *See Southwall*, 54 F.3d at 1579, 34 USPQ2d at 1679. We are convinced that the district courts interpretation of sandwiched as not precluding the flow through of the gypsum core on one of the fiberglass mats should have been applied to that term in claim 11 absent any indication that a different meaning was contemplated. The

evidence demonstrates that USG infringed claim 11 of the '496 patent when it is so interpreted. We therefore reverse the district courts grant of a new trial and reinstate the jurys finding of infringement with respect to claim 11 of the '496 patent.

B. The "glass mat-faced" claims

USG argues that the district court misconstrued the meaning of the limitation glass mat-faced and that when properly construed the faced claims[8] could not be infringed by USG's fiberglass gypsum board.

Claim 1 of the '496 patent is representative of these claims:

> An exterior insulation system for a building comprising a glass mat-faced gypsum support surface, insulating material having an inner surface and an outer surface, the inner surface of which is adhered to said support surface by an adhesive material, the insulating material being substantially free of channels penetrating there through and between said inner and outer surface, and an exterior finishing material overlying the outer surface of said insulating material. (Emphasis added.)

USG asserts that "glass mat faced" means that the surface of the board facing out from the studs to which insulation is applied is an exposed, non-gypsum covered glass mat. The district court, however, adopted Georgia-

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[8] Claims 1, 2, and 5 of the '496 patent and claims 1 and 2 of the '900 patent can be classified as "faced" claims.

Pacifics construction that the term "glass mat-faced" means "glass mat surface reinforcing material." Because USG's board is reinforced with fiberglass mats the court upheld the jurys finding that the "faced" claims were infringed.

USG argues that during prosecution of a different patent application in which claims were rejected in light of the Pilgrim patent, U.S. Patent No. 4,378,405, Georgia-Pacific surrendered any interpretation of the term "faced" that would include a completely embedded or coated fiberglass mat. The prosecution history statement relied on by USG was made by Georgia-Pacific nine months after the glass mat-faced claims of the '496 patent issued. There Georgia-Pacific stated:

> [T]he Pilgrim patent does not disclose glass mat-faced gypsum board. To the contrary, this patent discloses a gypsum board in which the glass mat is covered by a thin layer of gypsum (emphasis original).

USG argues that Georgia-Pacific used the term "faced" to distinguish its board from prior art fiberglass mat-reinforced boards based upon the difference between leaving the fiberglass mat on the working surface exposed versus completely embedding it.

Georgia-Pacific argues that this post-issuance statement is extrinsic evidence and should be rejected because the intrinsic evidence alone resolves any ambiguity of this disputed claim term.

The specification of the patent in suit is the best guide to the meaning of a disputed term. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582-83, 39 USPQ2d 1573, 1576-77 (Fed.Cir.1996); *see also Bell & Howell Document Management Prod. Co. v. Altek Sys.*, 132 F.3d

701, 705, 45 USPQ2d 1033, 1037 (Fed.Cir.1997)(When construing a claim, a court should look first to the intrinsic evidence, i.e., the claims themselves, the written description portion of the specification, and the prosecution history.) Additionally, when intrinsic evidence is unambiguous, it is improper for the court to rely on extrinsic evidence to contradict the meaning of the claims. *See Pitney Bowes, Inc., v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308-9, 51 USPQ2d 1161, 1167-68 (Fed.Cir.1999).

The '496 patent states at col. 9, lines 39-43:

> Although improvements in an EISystem can be realized by the use of a gypsum core which has but one of its surfaces faced with fibrous mat as described herein, it is preferred that both surfaces of the core be faced with substantially the same fibrous material....

Because the '496 patent refers explicitly to both surfaces of the board being faced, faced cannot mean only the surface facing out from the studs as is necessary for USG to prevail. Furthermore, in the prosecution of the '496 patent Georgia-Pacifics patentee declared to the PTO: "One of the glass fiber mat-reinforced surfaces was substantially gypsum-free and the opposite surface was substantially gypsum covered." Thus, the glass mat-faced term was represented to mean both surfaces of the board one of which was described as covered with gypsum. For these reasons we are convinced that the district court properly construed the "faced" claims.

We also note that for Georgia-Pacific to be bound by the statement made to the PTO in connection with a later prosecution of a different patent, the statement would have to be one that the examiner relied upon in allowing the claims in the patent at issue. *See Mannesmann Demag Corp. v.*

Engineered Metal Prods. Co., 793 F.2d 1279, 1284-85, 230 USPQ 45, 48 (Fed.Cir.1986) (In cases where a patentees amendments were not required in response to an examiners rejection or critical to the allowance of the claims, no estoppel has been found.)

C. The "additive" claims

Georgia-Pacific in its cross appeal argues that the court erred in granting USG a new trial on the additive claims[9] and that the jurys finding of infringement should be reinstated. USG on the other hand contends that its motion for JMOL should have been granted.

Claim 1 of the '900 patent is representative of the additive claims:

> Gypsum board comprising a set gypsum core faced with a fibrous mat, the gypsum core including one or more additives which are effective in simultaneously improving the water resistance and fire resistance properties of the board in an amount at least sufficient to impart to the board improved water resistance and fire resistance properties.

(Emphasis added.)

The district court held that even if it were to accept Georgia-Pacifics evidence revealing that it found the presence of glass fibers in the gypsum core of USG's board, the testimony did not demonstrate the presence of enough

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[9]Claims 1 and 2 of the '900 patent can be classified as additive claims.

fibers to confer improved fire resistant properties. Thus, the court found that the jury could not reasonably conclude that USG's board contained fire resistant additives in an amount sufficient to meet this limitation so that claims 1 and 2 of the '900 patent, and claim 8 of the '989 patent would be infringed. The court then entered an order granting USG's motion for a new trial as to these claims.

Ultimately, the decision as to whether a new trial should be granted is within the discretion of the trial court. *See Registration Control Systems, Inc. v. Compusystems, Inc.*, 922 F.2d 805, 809, 17 USPQ2d 1212, 1215 (Fed.Cir.1990) (citing *Allied Chemical Corp. v. Daiflon, Inc.*, 449 U.S. 33, 36, 101 S.Ct. 188, 66 L.Ed.2d 193 (1980)); see also *Wagner v. Fair Acres Geriatric Center*, 49 F.3d 1002, 1017 (3d Cir.1995). Accordingly, we will overturn the district courts decision only if the court abused its discretion. *See Registration Control, 922 F.2d at 809*; *Wagner*, 49 F.3d at 1017.

Accepting Georgia-Pacifics evidence, which USG disputed, some fire resistant material in the form of glass fibers was found in the gypsum core of USG's boards. These fibers, however, were not shown to be sufficient in the courts view to demonstrate fire resistant properties. The court concluded for this reason that the jury's verdict was not adequately supported by the evidence but that the insufficiency of proof was not enough to grant USG's motion for JMOL. When a verdict is against the weight of the evidence a court may grant a new trial. *See, e.g., Moxness Products, Inc. v. Xomed, Inc.*, 891 F.2d 890, 893, 13 USPQ2d 1169, 1172 (Fed.Cir.1989); see also *Wagner*, 49 F.3d at 1017. The district court therefore did not err in granting a new trial on the issue of infringement by USG in regard to claims 1 and 2 of the '900 patent. Because we conclude that claim 8 of the '989 patent is invalid due to obviousness-type double patenting, we vacate the district courts grant of a new

trial as to this claim.

IV. Willful Infringement

Georgia-Pacific contends in its cross appeal that the district court erred in failing to find that USG's infringement was willful. Willful infringement is a question of fact and must be established by clear and convincing evidence, for "the boundary between unintentional and culpable acts is not always bright." *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1221, 36 USPQ2d 1225, 1232 (Fed.Cir.1995); *American Med. Sys. v. Medical Eng'g Corp.*, 6 F.3d 1523, 1530-31, 28 USPQ2d 1321, 1325-26 (Fed.Cir.1993). Because willfulness raises issues of reasonableness and prudence, and is often accompanied by questions of intent, belief, and credibility, appellate review requires appropriate deference to the special role of the trial court in making such determinations. *See Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1571, 38 USPQ2d 1551, 1555 (Fed.Cir.1996); *S.C. Johnson & Son, Inc. v. Carter-Wallace, Inc.*, 781 F.2d 198, 201, 228 USPQ 367, 369 (Fed.Cir.1986). Thus, a finding that infringement was not willful will be sustained unless the reviewing court has a definite and firm conviction that the trier of fact erred. *See Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1057, 32 USPQ2d 1017, 1024 (Fed.Cir.1994).

Georgia-Pacific asserts that the legal opinion which USG received was flawed and therefore USG was not entitled to rely on it. Georgia-Pacific's attack on the legal opinion is without merit. The court found that "while the opinion of counsel might have been more complete and might have better predicted the issues that ultimately went to trial, it is the type of opinion on which U.S. Gypsum should have felt comfortable in relying on." Furthermore, the court found that USG relied upon that opinion and did not proceed with a wrongful intent or in a reckless disregard of Georgia-

Pacific's rights. We conclude that the evidence supports the district courts holding that USG did not willfully infringe.

CONCLUSION

For the reasons stated, we affirm the judgment of the district court with respect to infringement of claims 1, 2 and 5 the '496 patent, reverse the courts grant of USG's motion for a new trial with respect to claim 11 of the '496 patent and reinstate the jury's finding of infringement of that claim. We vacate the courts judgment with respect to infringement of claims 1, 6, 9, 10, 12, 15 and 17 of the '989 patent, and vacate the courts grant of a new trial with respect to claim 8 of the '989 patent. We affirm the courts grant of a new trial with respect to claims 1 and 2 of the '900 patent. The case is remanded for further proceedings consistent with this opinion.

COSTS

No costs.

AFFIRMED-IN-PART, REVERSED-IN-PART, VACATED-IN-PART, AND REMANDED